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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,570	02/19/2002	Lien-Fu Lu	BHT-3214-6	1284

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04/01/2004

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EXAMINER

MARKS, CHRISTINA M

ART UNIT	PAPER NUMBER
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3713

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/076,570

Applicant(s)

LU, LIEN-FU

Examiner

C. Marks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

The objections to claims 1-8 are withdrawn due to the amendment filed 02 February 2004 canceling those claims.

### ***Claim Rejections - 35 USC § 112***

The rejection of claims 1-8 under 35 U.S.C. §112 is hereby withdrawn due to the amendment filed 02 February 2004 canceling those claims.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 9-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin et al. (US Patent No. 4,949,972) in view of Liang (US Patent No. 5,560,617) further in view of Bateman (US Patent No. 5,618,044).

Goodwin et al. disclose an electronic target unit for detecting a bullet that has a housing having a receiving area with an opening for movably mounting a target paper (FIG 44). A first bullet passageway is defined by the receiving area (FIG 4). There is a notch below the first passageway (FIG 4, bottom of passageway). A sensitive target area is provided in said housing that is behind the target paper and provided with a sensing circuit for sensing electronic signals generated when hit by bullets (FIG 4).

The sensing circuit is connected to a scoring circuit for counting and providing the score results of the scores to the user on display (Column 8, lines 67-68; Column 9, lines 1-5).

Goodwin et al. does not disclose the location of the display, but such a location would be a design choice to one of ordinary skill in the art and one of ordinary skill in the art would be

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motivated to put it on the housing as it would be obvious that only one piece of manufacture would be required. The system works by allowing the bullets to be shot through the target paper and the bullet is detected by hitting the target area and the results are shown on the display screen.

Goodwin et al. does not disclose the scoring circuit is acoustic. Liang discloses a dartboard, that like the system of Goodwin et al. uses electronic means to establish a score. Liang discloses in the system that a radio signal is used with the dartboard to obtain the score from the electronic circuit and then further report the score as sound pronouncing the score (Column 1, lines 45-50). Liang discloses that this setup is advantageous as it eases the reading of the score. It would have been obvious to one of ordinary skill in the art to incorporate the sound system of Liang into the device of Goodwin. One of ordinary skill in the art would be motivated to do so in order to make it easier for the player to read and understand their score as taught by Liang.

Further, Goodwin et al. do not disclose a recovering bin that catches the bullets. Bateman discloses a modular system that requires very little space to serve as a bullet trap and containment cavity that includes a containment unit for recovering bullets (Abstract). Bateman also discloses it is customary in target practice to provide a means of stopping bullets after they have traveled through a target in order to prevent harm or damage to persons (Column 2, lines 19-25). Bateman discloses using a steel material to stop the bullets (Column 4, lines 30-34) and a containment cavity in which the bullets will be stored (Column 4, lines 23-25). It would have been obvious to one of ordinary skill in the art to incorporate the teachings of Bateman into the device of Goodwin et al. By applying the teachings of Bateman, one of ordinary skill in the art would understand that a plate and containment unit could be added to the device of Goodwin et al. One of ordinary skill in the art would be motivated to make this incorporation, as taught by

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Bateman, to stop bullets after they travel through the target in order to prevent harm. Further, one of ordinary skill in the art would be motivated to do this in the instance that the target were used for BBs. In this instance, one of ordinary skill in the art would be motivated to apply the teachings of Bateman in order to enable the user would be able to preserve BBs after use.

Though Bateman does not disclose a drawer slidably attached to the notch, a skilled artisan would more than understand that the containment unit must be emptied from time to time to properly function. Thus, it would be obvious to a skilled artisan to incorporate a drawer as part of applying the Bateman teachings to Goodwin et al. Bateman discloses the collection tray is located below the target device (FIG 1, reference 7) as a drawer. Bateman does not disclose a notch is provided for movably inserting the bin into a drawer. However, such a feature would be a design choice would be obvious to one of ordinary skill in the art. By allowing the drawer to slide in and out of its recess, it would allow easier access to the stored bullets and thus provide a convenience for the user and motivation to one of ordinary skill in the art to incorporate such a feature.

One of ordinary skill in the art would be motivated to use the drawer in order to maintain the functionality of the backstop, as it would not properly work if it were to become too full. The placement of the drawer would be a design choice wherein the artisan would be motivated by the needs and desires of their design. A skilled artisan would be motivated, for instance, to place the drawer into the notch discussed above, as it would be a quick and easy modification to the Goodwin et al. system and would require no additions, just a substitution of parts. Further, by using such a notch, a skilled artisan would be motivated to make the system player friendly. Putting the drawer in a place where it can be easily accessed would accomplish such, thus providing the skilled artisan with the desired motivation to use the notch board (208) as a drawer in the projectile stopping system of Bateman

Goodwin et al. disclose an opening at the position ahead of the hitting area. Enclosing the walls around the housing forms the bullet passage. Goodwin et al. does not disclose a cover; however, such a feature would be a supplemental design choice, obvious to one of ordinary skill in the art. Covers are known in dartboards and one of ordinary skill in the art would be motivated to incorporate such a cover in order to provide a means of protection for the electronic equipment of the device when it is not in use.

Regarding claim 11, the structure of Goodwin et al. includes L shaped rails at the sides of the opening and the target paper can be inserted therein (FIG 4, FIG 5, and FIG 12) between the two brackets by pin means. Goodwin et al. do not disclose slidable insertion; however, the manner in which the paper is secured to the brackets is a design choice. One would be motivated to slidably insert to provide a more secure attachment and eliminate the usage of pins. Ultimately, the manner in which the paper is secured is motivated by the wants and desires of the designer for the performance of the system.

Regarding claim 12, as discussed above, the target includes a supporting frame (FIG 11).

Regarding claim 13, the receiving area is recessed to form a lower step of the supporting frame (FIG 4).

Regarding claims 15 and 16, Bateman discloses that the material is vibration absorbing and when applying such teachings to Goodwin et al., one of ordinary skill in the art would understand that the target area is thus vibration absorbing. There are a plurality of enclosing walls (FIG 4) and each wall has a holes located at its lowermost portion (FIG 4) and define a number of bullet passageways that communicate with the hole and other bullet passageways (FIG 4). The method in which the scoring is achieved would be a design choice to one of ordinary skill in the art and thus such adaptations such as using photosensitive means to detect

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the bullets would be obvious to one of ordinary skill in the art. A skilled artisan would have the capability to implement other means of detecting the bullets to form a score and thus such implementations would be obvious to such a skilled artisan.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin et al. (US Patent No. 4,949,972) in view of Liang (US Patent No. 5,560,617) further in view of Bateman (US Patent No. 5,618,044) further in view of Hodge (US Patent No. 5,516,113).

Goodwin et al. in view of Bateman discloses the target area being made of vibration absorbing material and the sensing circuit is that of a light detector. It is not disclosed that the detection is made by a printing method.

Hodge discloses a sensing means for a target wherein the circuit board is printed with a number of resistors in a grid formation. The grid is then used to determine the position that was hit by the projectile. It would have been an obvious design choice to one of ordinary skill in the art to use the printed grid of Hodge instead of light beams grid by mounting the grid on the vibration resistant material. Both determine the location of the projectile and can provide the information to the computer. Thus, substituting a printed grid in place of the light beams would have been an obvious alternative to one of ordinary skill in the art.

### ***Response to Arguments***

Applicant's arguments with respect to claims 19-16 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

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combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding the Applicant's argument that the combination does not suggest a number of elements, the Examiner states the elements have been addressed above in the rejections and further the argument is conclusionary, as it provides no reason as to why the Examiner is wrong in the presentation of the rejection. The argument only alleges that the combination does not teach the listed elements and is thus not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Examiner provided proper motivation for the combinations as detailed above. The Applicant has failed to address this motivation and the response that the Applicant believe there is no suggestion is a conclusionary statement with no support as to why such is true and is thus not convincing.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO




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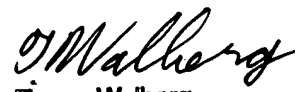
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Marks whose telephone number is (703)-305-7497. The examiner can normally be reached on Monday - Thursday (7:30AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa J Walberg can be reached on (703)-308-1327. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
cmm  
March 26, 2004

  
Teresa Walberg  
Supervisory Patent Examiner  
Group 3700